

Db 61 GIFETKGLWSDDRKKHLLIREQHPELDIRLVFSSSRKLYKGSPTS YGEWCEKHGILF 120

Qy 121 ADKLIPAEWIKPEPKKEVPFDR LKRKGKK 149

||||| :|||||||: | | | |

Db 121 ADKLIPVAGVKEPKKEVPDFKFKTKKGVK 149

10/585964 SEQ ID NO:25

RESULT 12

ENRN_BPT3

ID ENRN_BPT3 Reviewed; 152 AA.

AC P20314;

DT 01-FEB-1991, integrated into UniProtKB/Swiss-Prot.

DT 01-FEB-1991, sequence version 1.

DT 25-NOV-2008, entry version 38.

DE RecName: Full=Endodeoxyribonuclease I;

DE EC=3.1.21.2;

DE AltName: Full=Endodeoxyribonuclease I;

DE Short=Endonuclease;

GN Name=3;

OS Enterobacteria phage T3 (Bacteriophage T3).

OC Viruses; dsDNA viruses, no RNA stage; Caudovirales; Podoviridae;

OC Autographivirinae; T7-like viruses.

OX NCBI_TaxID=10759;

OH NCBI_TaxID=562; Escherichia coli.

RN [1]

RP NUCLEOTIDE SEQUENCE [GENOMIC DNA].

RC STRAIN=Luria;

RX MEDLINE=90133923; PubMed=2614843; DOI=10.1016/0022-2836(89)90102-2;

RA Beck P.J., Gonzalez S., Ward C.L., Molineux I.J.;

RT "Sequence of bacteriophage T3 DNA from gene 2.5 through gene 9.";

RL J. Mol. Biol. 210:687-701(1989).

CC -!- FUNCTION: Endodeoxyribonuclease I, which is expressed in the late

CC stage, is necessary for T3 genetic recombination and the breakdown

CC of host DNA. In the early stage of infection, T3 DNA replicates as

CC a linear monomer. In the late stage, the T3 DNA replicates via

CC linear concatemers several genomes in length. The gene 3 product

CC has also been implicated in the maturation of these concatemers.

CC -!- CATALYTIC ACTIVITY: Endonucleolytic cleavage to 5'-

CC phosphooligonucleotide end-products.

CC -----

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CC -----

DR EMBL; X17255; CAA35132.1; -; Genomic_DNA.

DR PIR; S07505; S07505.

DR RefSeq; NP_523312.1; -.

DR HSSP; P00641; 1MOD.

DR SMR; P20314; 17-145.

DR GeneID; 927412; -.

DR GO; GO:0005634; C:nucleus; IEA:InterPro.

DR GO; GO:0008833; F:deoxyribonuclease IV (phage-T4-induced) act. . .; IEA:InterPro.

DR GO; GO:0003677; F:DNA binding; IEA:InterPro.

DR GO; GO:0015074; P:DNA integration; IEA:InterPro.

DR GO; GO:0016032; P:viral reproduction; IEA:InterPro.

DR InterPro; IPR008029; Endonuclease-I_phage.

DR InterPro; IPR011578; Restrict_endonuc_C/endonuc_I.

DR Gene3D; G3DSA:3.40.91.30; Restrict_endonuc_C/endonuc_I; 1.

DR Pfam; PF05367; Phage_endo_I; 1.

PE 4: Predicted;

KW Endonuclease; Hydrolase; Nuclease.

FT CHAIN 1 152 Endodeoxyribonuclease 1.

FT /FTId=PRO_0000106485.

SQ SEQUENCE 152 AA; 17432 MW; BFCDE82A4C0D611B CRC64;

Query Match 77.7%; Score 615; DB 1; Length 152;

Best Local Similarity 83.1%; Pred. No. 5.6e-49;

Matches 113; Conservative 11; Mismatches 12; Indels 0; Gaps 0;

